REMARKS

Applicant respectfully requests reconsideration of this application as amended. Claim Nos. 1, 6, 10, 35, 40, and 44 have been amended. No claims have been canceled, and no claims have been added.

Rejections under 35 U.S.C. § 103

Claims 1-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engdahl et al. (5,500,853) in view of Shachar et al. (5,668,807).

Claims 14-34, 48-50

Applicant respectfully submits that the combination of Engdahl and Shachar does not describe or suggest Applicant's claims 14-34, and 48-50. Engdahl imparts that "seven DS2s per DS3 and four DS1s per DS2." (col. 4, lines 26-27) Engdahl describes that each "DS3:DS2 demultiplexer..connects to one of seven..demultiplexers" (col. 22, line 66 to col. 23, lines 2). Engdahl goes on to say that that "there are seven DS2 to DS1 demultiplexers...one per constituent DS2 channel. Each DS2 to DS1 demultiplexer is alike, and performs the same functions." (col. 23, lines 60-62) Similarly, Engdahl discloses that "four DS1 monitors" (col. 24, lines 4) are required for each DS2 data stream. Furthermore, each demultiplexer in Engdahl has separate memory in the form of a state counter that "provides a pointer that indicates which bit of the DS3 M-frame the incoming DS3 data bit is associated with." (col. 23, lines 18-20) As such, Engdahl is the same as the prior art disclosed by the Applicant in Figure 1 in that a plurality of deframers each having separate memory internal to the deframers are required to demultiplex a higher DS-level data stream.

Furthermore, Engdahl does not use per alignment state machines, but rather merely discloses that "the shift register is searched" and a counter "is advanced or retarded the correct number of subframes to obtain..frame alignment" (col. 24, lines 56-61). In addition, while the

TDM superchannel related system of Shachar includes initializing of a state machine, Shachar describes a state machine for framing packets, and has nothing to do with sync hunting for deframing purposes. Shachar describes that "starting to transmit output is postponed if this is not the first time slot assigned to the logical channel" (Shachar Abstract). Shachar uses a delay mechanism and processes signals one at a time.

As such, the references do not individually or in combination describe or suggest the claimed: 1) "a first sync hunt logic to sync hunt a first signal; a second sync hunt logic to sync hunt a second signal; a memory controller coupled with the first and second sync hunt logics, the memory controller to perform read and write operations between the first and second sync hunt logics....to store a set of per-alignment state machines." (Claim 14); 2) "a memory controller coupled with the memory unit, the memory controller to perform read and write operations between the memory unit and a plurality of sync hunt logic; and....simultaneously perform sync hunting for a plurality of signals with the set of per-alignment state machines" (Claim 20); 3) "simultaneous sync hunting" two signals ("the first" and "second signal") with the subsets ("the first" and "second subset") of "per-alignment" state machines using a "memory controller coupled to the memory unit" (Claims 25, 32); and 4) "synchronization hunting logic to simultaneously synchronization hunt low bit rate signals extracted from different high bit rate signals using state machines stored in the memory" using "a memory controller to perform read and write operations between the low bit rate signal format synchronization hunting logics and the memory." (Claim 48).

Applicant respectfully submits that dependent 2-5, 7-9, 11-13, 15-19, 21-24, 26-31, 33-34, 36-39, 41-43, 45-47, and 49-50 are allowable for at least the reason that they depend on an allowable independent claim.

Claims 6-13, 40-47

Applicant respectfully submits that the combination of Engdahl and Shachar does not describe or suggest at least the following limitations in the Applicant's amended claims: 1)

"simultaneous sync hunting" two signals ("the first" and "second signal") with the subsets ("the first" and "second subset") of "per-alignment" state machines in a shared memory (Claims 6, 40, 44); 2) "buffering ...from the...per-alignment state machines." (Claim 6, 40, 44)

Applicant respectfully submits that dependent 7-13, and 41-47 are allowable for at least the reason that they depend on an allowable independent claim.

Claims 1-5, 35-39

Applicant respectfully submits that the combination of Engdahl and Shachar does not describe or suggest at least the following limitations in the Applicant's amended claims: 1) "simultaneous sync hunting" two signals ("the first" and "second signal") with the subsets ("the first" and "second subset") of "per-alignment" state machines in a "shared memory" (Claims 1, 35).

Applicant respectfully submits that dependent 2-4, and 36-39 are allowable for at least the reason that they depend on an allowable independent claim.

Grouping by Examiner

As a separate issue, Applicant also respectfully disagrees with statements in the Office Action regarding similar limitations in different claims. In particular, Applicant respectfully disagrees with the Office Action when it states that claims 14-34 have substantially all the limitations of claims 1-13. More specifically, Applicant respectfully submits that the Office Action does not put forth a prima facie case for rejecting claims 14-34 because it does not address the elements of claims 14-34. At the least, this set is distinguished because it includes a 1) "memory controller coupled with the first and second sync hunt logics, the memory controller to perform read and write operations between the first and second sync hunt logics and a memory unit" (Claim 14); 2) "a memory unit to store a set of per-alignment state machines; a memory controller coupled to the memory unit...to perform read and write operations between the memory unit and a plurality of sync hunt logic" (Claim 20); and 3) "first deframing slice

having...buffers to store a first set of states from a first subset of the set of per alignment state machines" and a "second deframing slice having...buffers to store a second set of states from a second subset of the set of per alignment state machines" (Claim 32).

Also, Applicant respectfully disagrees with the Office Action when it states that claims 48-50 have substantially all the limitations of claims 14-19 in combination with machine-readable media claims 1-5. More specifically, Applicant respectfully submits that the Office Action does not put forth a prima facie case for rejecting claims 48-50 because it does not address the elements of claims 48-50. At the least, independent claim 48 within this set is distinguished because it includes a "synchronization hunting logic to simultaneously synchronization hunt low bit rate signals extracted from different high bit rate signals using state machines stored in the memory" (Claim 48).

CONCLUSION

Applicant respectfully submits that the rejections have been overcome by the remarks, and that the Claims are in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the Claims be allowed.

Invitation for a telephone interview

The Examiner is invited to call the undersigned at 408-720-8300 if there remains any issue with allowance of this case.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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Date: 6/28, 2004

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